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On R&D Items Big and Small, Congress Gushes With Advice

As the Congressional session winds down, federal agencies are left to ponder a variety of directives, advice, cautions, and hints sprinkled throughout an obscure literature—the reports accompanying the appropriations bills that provide their money. This year, as usual, the research agencies have reaped their bountiful share of what is referred to as "report language."

In the big pile from Capitol Hill, the National Science Foundation is directed to deliver a "comprehensive long-range strategic plan" for research by November 1. The Department of Agriculture is told to put more emphasis on applied research in awarding competitive grants. The National Institutes of Health is "encouraged" to develop a multi-institute plan for research on Parkinson's disease and directed to commission an analysis of all the $70 billion that the federal government spends on R&D. And so forth.

While appropriations bills possess the force of law, the reports—separate documents from each of the 13 appropriations subcommittees in the House and Senate—are an explanatory literature without statutory standing. Sometimes, an agency will respond with minimal compliance or altogether ignore report language. For instance, the latest report from the House Appropriations Subcommittee for the Department of Energy complains that for two years running, DOE has ignored Committee directives to present US negotiating plans for siting the International Thermonuclear Experimental Reactor (ITER)—a multi-nation project for which total construction and operating costs are estimated at $20 billion.

Nervous about the strength of political support for ITER, the Senate Appropriations report warns of the risks of "another SSC debacle." And, apparently despairing of a response from DOE, the House and Senate Subcommittees teamed up in a conference report August 4 to "urge" a report on fusion by the President's Committee of Advisors on Science and Technology.

Brazen non-responsiveness to the dictates of Congressional reports, however, is rare, and usually confined to agencies rooted in a national-security background. In Washington policy circles, appropriations reports are customarily scrutinized like theological texts, since they presumably reflect the thinking and preferences of the Appropriations Subcommittee Chairmen, powerful, even omnipotent, figures in determining agency budgets.

Reports are also issued by legislative subcommittees—which write non-appropriating statutes. But it's the money-voting appropriations subcommittees that command the most respectful attention in today's financially stressed Congress.

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Engineering Academy Faces Election Battle for Presidency

An open contest is shaping up for the Presidency of the nation's most prestigious engineering society, the National Academy of Engineering (NAE), thus confronting the NAE management with a prospect as welcome as salmonella in the veal fricassee at the annual banquet.

The election, a mail ballot scheduled for next March, is for a six-year term beginning in July. In the Stalinist tradition of professional societies, the ballot would normally list only one Presidential candidate—the handpicked choice of an in-crowd nominating committee. But, as a concession to democratic appearances, provision is also provided for a candidate to get on the ballot through a cumbersome petition process, which requires written support of five percent of the

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In Brief

Immigration of scientists and engineers to the US increased from 12,600 in 1990 to 22,900 in 1992, following passage of the Immigration Act of 1990, which increased the quotas for skilled workers, NSF reports. Over 55 percent of the S&E immigrants came from the Far East, with India accounting for 15.7 percent of all S&E arrivals and the PRC, 13.5 percent. The figures are contained in NSF *Data Brief* 94-310, four pages, available without charge from: NSF, Division of Science Resources Studies, Arlington, Va. 22230; tel. 703/306-1780; fax 703/644-4278.

Another NSF tally (94-309), available as above, estimates that federal R&D spending in fiscal 1994 (which ends September 30) will total $74 billion, about one percent below '93. The biggest decline was in spending on R&D plant, down 17 percent. Spending on basic and applied research was estimated at $28 billion, a 2 percent gain over the previous year. Defense R&D accounted for 51 percent of the total, down from 57 percent in 1990.

NSF came out of a House-Senate appropriations conference with a whopping sum for academic lab buildings and research equipment—$250 million for next year, but with a string attached: If the White House, which is wary of that bottomless pit, doesn't ask for at least another $250 million for this purpose in its fiscal 1996 budget, due in February, the new appropriation will be rescinded.

Congress gave the Administration almost all it requested for the widely favored Advanced Technology Program at the National Institute of Standards and Technology. With ATP budgeted this year for $200 million, the White House requested $451 million for next year. Congress produced $431 million.

. . . Liebowitz Got 42 Percent of Vote in 1991 Election

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membership from at least 10 institutions—about 84 members in the NAE's current ranks of approximately 1660. And coming on strong is a veteran of the NAE petition route, who, at this early stage, claims the backing of over 400 members: Harold Liebowitz, former Dean and currently Professor of Engineering at George Washington University.

In 1991, with the NAE leadership openly opposed to his candidacy, Liebowitz received 42 percent of the vote in a run against the incumbent, NAE President Robert M. White, who will retire next year after reaching the 12-year limit for the post. The close election was so embarrassing to the NAE chiefs that the press release announcing White's reelection did not mention that he had been opposed, let alone seriously challenged [SGR, April 15, 1991: "NAE Covers up Election That Nearly Defeated Its President"].

A downscale, 30-year-old subsidiary of the venerable National Academy of Sciences, the NAE is generally regarded as the honorary pinnacle of the engineering profession. It is also an important link between the federal government and industrial and academic engineering. In tandem with the far more visible and illustrious Academy of Sciences, the NAE is involved in numerous policy studies commissioned by federal agencies, which last year provided about 90 percent of the $200 million budget of the two academies and the affiliated Institute of Medicine.

For the forthcoming election, Liebowitz and his backers are pushing for his acceptance as a choice of the nominating committee, chaired by Paul Gray, former President of MIT, and scheduled to deliver its recommendations to the NAE Council in February. With or without the committee's endorsement, fulfillment of the petition requirement assures Liebowitz a place on the ballot. But anointment by Gray and colleagues would most likely head off a repetition of the high-level, organized opposition that Liebowitz's candidacy evoked in 1991.

In that election, Stephen D. Bechtel Jr., then Chairman of the NAE—the number two spot in the hierarchy—endorsed White's candidacy in a letter to all members. Bechtel, former head of the giant Bechtel Group construction firm, noted that White was the choice of the nominating committee, while Liebowitz was a petition candidate.

A letter signed by several other senior NAE members said that "we should have great respect for the workings of the nominating committees of our Academy." Bechtel still serves on the nominating committee, along with several others who openly opposed Liebowitz's 1991 run for the Presidency.

The oddity of it all was that Liebowitz, then age 67, was not a fringe character in NAE affairs or in academic engineering and was, in fact, part of the establishment. He was elected NAE Home Secretary in 1978, three years after his election to the Academy, and was reelected to that post in 1982. He has collected a flock of professional honors, including election to five foreign academies of engineering.

So far, senior NAE management is silent on Liebowitz's renewed candidacy. But the aversion lingers on. What seems to have created offense last time around was his maverick quest for the presidency and his outspoken, though actually mild, criticism of the NAE as too timid in representing engineering in public policy affairs. In a letter to NAE members in 1991, Liebowitz said there's a need "for a more vigorous NAE role in technology-policy affairs." He said he would prune the NAE's wide-ranging agenda to a few basic issues, such as promotion of engineering research, the environment, and industrial competitiveness. The NAE, he strongly suggested, was both stretched too thin and too passive in big policy matters, and was not doing its job for engineering. Though always courteous toward incumbent White, who is well-regarded by the members, Liebowitz nonetheless was breaking ranks and stomping on the status quo.

Scores of members responded enthusiastically. Typical among them, J. Fred Bucy, retired CEO of Texas Instruments, while praising NAE President White's performance, wrote that "after two terms in office, we should elect a person with new ideas who can introduce new energy—a person who will invigorate an organization."

In letters to the nominating committee for next year's election, Liebowitz's supporters are stressing that he received 42 percent of the vote last time and that he has far surpassed the 5 percent mark for listing as a petition candidate. In view of this, they argue, Liebowitz merits endorsement by the nominating committee.

Maybe so. But there's no such requirement in the NAE rules. And early signs suggest that, once again, the NAE management does not intend to sit still for an independent candidate. In a letter nearly a year ago to all members, NAE Home Secretary Simon Ostrach outlined the nominating and voting schedule for the Presidency and other offices to be filled next year.

Inviting suggestions for candidates, the letter cryptically states: "The process has been initiated earlier than normal to permit the NAE 1995 Nominating Committee more time to deal with the important and complex matters related to the position of President."

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. . . Senate Report Had a Big Impact on NSF Policy

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The appropriations reports do shape events. For example, last year's Senate Appropriations report on NSF put that politically timid agency into a frenzy of introspection and reorganization by demanding that it spend more on "strategic research" or lose funds to more compliant agencies.

This year's Senate report, issued July 14, commends NSF for its obedient response, and sets the November 1 deadline for delivery of a "comprehensive long-range strategic plan." The source of the NSF directive, Subcommittee Chair Barbara Mikulski (D-Md.), has left a muddled trail of explanations of strategic research, but regardless of what she means, NSF says it's tagging along.

Her Subcommittee counterpart in the House, Rep. Louis Stokes (D-Ohio), has demonstrated little interest in science policy, while vigorously using his post to designate funds for programs to assist minority-group members. Thus, the report from Stokes' Subcommittee "strongly urges" NASA—one of the many agencies in its jurisdiction—to increase its support at historically black colleges and universities and Hispanic-serving institutions. Noting that these schools now receive about 6 percent of NASA's higher-education funds, the report says the space agency should "establish a goal" of 10 percent for 1999.

Appropriations Subcommittee reports are almost invariably endorsed without change by the full Appropriations Committee and published as Committee reports. Through these reports, on matters big and little, lobbyists, influential Congressmen, and their staff henchmen can infiltrate and shape policymaking and spending priorities in the research agencies. The issues, programs, and projects they address may or may not have been publicly discussed at annual appropriations hearings. But even if they did get an airing, most likely it would have been brief, since each appropriations subcommittee is responsible for many billions of dollars spread across many agencies and their programs.

The House and Senate subcommittees that vote the budget for NSF are also responsible for dividing some $90 billion among the Department of Housing and Urban Development, the Department of Veterans Affairs, NASA, research at the Environmental Protection Agency, and a few others. NSF is small fry in that mix—budgeted for a mere $3.4 billion.

Though influencing the expenditure of astronomical sums, the appropriations reports often get down to small items. For example, in addressing the $100-million-a-year competitive research grants program of the Department of Agriculture, part of a multi-agency appropriation of $68 billion, this year's House Appropriations report asserts: "The Committee feels it would be advisable to devote increased competitive grant funds to applied research to better demonstrate the role of this program in assisting with the many problems facing agriculture."

Never mind that Agriculture's competitive grants program was designed to promote basic research. The House Appropriations Subcommittee for Agriculture, Rural Development, Food and Drug Administration and Related Agencies, chaired by Rep. Richard Durbin (D-Ill.), has spoken, and is sure to receive attention.

NIH, the most Congressionally hovered-over research agency, regularly receives a shower of report language, ranging from pet projects of legislators to grand policy issues of biomedical research and beyond. Thus, the latest report of NIH's Senate Appropriations Subcommittee, chaired by Senator Tom Harkin (D-Iowa), states: "The Committee is encouraged to hear of promising cancer research involving shark cartilage and encourages [the National Cancer Institute] to consider supporting this research."

Among the appropriators, another means of indicating preference is through expressions of disappointment. Thus, the Senate report for NIH recalls that last year, the Subcommittee commended the National Heart, Lung, and Blood Institute (NHLBI) for paying attention to behavioral and social factors in heart disease. Alas, the report goes on, "The Committee is disappointed, however, that once again, none of the existing NHLBI specialized centers of research grants is behaviorally focused." To remedy this failure, the appropriations report "encourages" the Heart Institute to fund a specialized center "consistent with its commitment to the behavioral sciences."

Another route to influence is a call for the preparation of plans for dealing with specific issues, as exemplified by the section of Harkin's report concerning the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). "The Committee is concerned about the prevalence and costs of kidney stones and the impact of the urological complications of diabetes mellitus," the report states. "Accordingly, the Committee encourages the NIDDK to develop plans for accelerating research in these areas."

The Senate report on NIH conveys the impression that the legislators view Bethesda as bastion of biomedical lethargy. Discussing the budget of the National Institute of Neurological Disorders and Stroke, the report notes promising developments for the treatment of Parkinson's disease. But, it continues, "the Committee is troubled that the disproportionately low level of resources devoted to research in this field as well as the absence of a coordinated research program will stymie efforts to capitalize on those breakthroughs."

Harkin apparently doubts NIH's ability to set things right in this field of research, for his report goes on to state: "The Committee, therefore, directs that the National Institutes of Health convene a consensus conference as soon as possible, but no later than next year's hearings to develop a comprehensive plan for a coordinated research agenda among the National Institute of Neurological Disorders and Stroke, the National Institute of Aging, the National Institute of Environmental Health Sciences, and others as appropriate."

Sometimes both House and Senate reports converge on

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. . . NIH Told to "Pay Close Attention" to a Proposal

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the same topic and remedy, which means the lobbyists have been doing their job. In the case of Parkinson's disease, the report of the House Appropriations Subcommittee states that "more research involving different institutes and centers is needed. The Committee therefore encourages NIH to convene a consensus conference in the near future to develop a coordinated research agenda among the Institutes which are studying Parkinson's."

While the infamous budget "earmarks," specifying appropriations for hometown projects of influential legislators, must be written into appropriations bills, agencies are sometimes alerted through report language to be receptive to a particular project in their discretionary spending. In the Congressional tango with NIH this is an especially delicate process, since NIH operates behind statutory requirements of peer-review approval not easily breached even by Congressional influence. Nonetheless, there are ways.

The latest Senate report says, "The Committee would direct the National Institutes of Health to pay close attention to the proposal submitted by the University of Kentucky in Lexington, KY, requesting funds under the Extramural Research Facilities Program. These moneys would be used to construct an allied health professions building ... to be named after the late Congressman William H. Natcher of Kentucky." Natcher was a paragon of support for biomedical research during his longtime chairmanship of the House Appropriations Subcommittee for NIH.

Chairmanship has its privileges. In the section devoted to the Centers for Disease Control and Prevention, the Subcommittee chaired by Iowan Harkin expresses concern about playground injuries, and states: "The Committee has included $725,000 to undertake an initiative on playground injuries, and recommends that this research be undertaken by the National Center at the University of Northern Iowa."

Reflecting Congress's fascination with "alternative medicine," the Senate Subcommittee for NIH raised the budget of the NIH Office of Alternative Medicine from $3 million to $6 million. And, as frequently is the case, the accompanying report demonstrated the urge to manage, noting that "the Committee has included $750,000 for the creation of a data base in alternative medicine. The purpose of the data base is to bring together all the existing data and literature on alternative medicine and develop organized, systematic, and up-to-date reviews of the relevant scientific data."

Appropriations reports easily ascend from the minute to the cosmic. Harkin and company note that scientific opportunities are great but times are tough for biomedical-research funding. "These realities have compelled the Committee," the report states, "to consider the composition of the overall Federal Government research and development budget, which currently totals more than $70,000,000,000 a year.... The Committee is concerned, for example, that medical research is not at its optimal level of priority and support relative to its importance to national security."

To assist in deliberations on this matter, the report continues, "the Committee has provided $1,000,000 within the Office of the Director [of NIH] to commission a study by the National Academies of Sciences and Engineering and the Institute of Medicine (IOM). The study should consider the criteria that should be used in judging the appropriate allocation of funds to research and development activities, the appropriate balance among the different types of institutions that conduct such research, and the means of assuring continued objectivity in the allocation process." The report says that in carrying out this nonsensical assignment, the Academies and the IOM "should consult with the [White House] Office of Science and Technology Policy in planning the framework for the report." Delivery date: Dec. 31, 1995.

NIH also received another assignment from its Senate moneymaster. Noting conflicting estimates concerning "the effect that particular diseases have on medical and other social costs," the appropriations report "therefore directs NIH to prepare a table showing all of the estimates of the societal impact of the diseases on which NIH ICD's [Institutes, Centers, and Divisions] conduct research, by disease and ICD, for the most recent years estimates are available. Medical costs should be shown separately from the costs of lost productivity or other indirect effects. The study should show the total of the estimates, accompanied by any discount NIH believes may need to be applied to reflect possible double-counting. NIH should indicate on the same chart fiscal year 1994 spending on the diseases in question."

The Chairman of the House Subcommittee for NIH, Rep. Neal Smith (D-Iowa), seems to be still feeling his way in the role long dominated by the late Congressman Natcher. It was under Natcher that NIH was propelled into organizing the outside study that resulted in recommendations for raising the scientific quality of its intramural program and downsizing the NIH Clinical Center [SGR May 15: "NIH Intramural Program Draws Critical Review"].

So far, at least, Smith is far less intrusive than his Senate counterpart, Harkin, in dealing with NIH. Nonetheless, the latest report of Smith's Subcommittee, issued June 21, delves into big, sensitive issues in the management of biomedical research. While urging NIH to get on with revamping the intramural program, the House report says the extramural program merits "a ground-up review by an impartial group of scientists and science managers."

The report observes, "With a few exceptions, the mechanisms of support in 1994 are the same mechanisms used 20 years ago. This is true despite the dramatic growth of NIH's budget for extramural programs and the evolution of a larger and more diverse non-governmental biomedical research enterprise." Calling for a review by "a panel composed principally of personnel outside of NIH," the report set a delivery date of February 15.

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. . . Study Ordered of Fate of Failed Grant Applicants

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How is NIH responding to this assignment? Very slowly, which is one way of coping with difficult tasks from Capitol Hill. A source at NIH tells SGR that there's a need to "refine the questions" and "zero in on exactly what they want" before the extramural study can proceed. Toward this end, NIH is holding discussions with the House Subcommittee staff. In such uncertain circumstances, of course, appointment of a study panel has been put off, and the February 15 deadline is considered "impossible," says our NIH source.

The House Subcommittee provided NIH with another difficult assignment. This one concerns the fate of "researchers who are unsuccessful in applying for NIH grants." The report states that a "preliminary study" of fiscal 1990 applicants found that 39 percent remained unfunded by NIH by the end of 1993, "but only 10 percent of those whose applications scored in the top fifty percent remained unfunded."

Describing these findings as "very interesting and worthy of further analysis," the report "directs NIH to conduct a more thorough, longer-term study of this question." Among the topics for examination are the participation of unfunded researchers in other NIH-financed projects and alternative sources of support. Recognizing that the study "will require a significant amount of time," the House Subcommittee refrained from "a precise timetable," but asked NIH "to begin work promptly so that some findings may be available in time for" annual appropriations hearings early next year.

The homework burdens imposed by report language can be onerous, but the price of ignoring these Congressional directives can be ruinous. Allan Bromley, in his newly published memoir of service as Presidential Science Advisor in the Bush Administration (*The President's Scientists: Reminiscences of a White House Science Advisor*; Yale University Press), tells of the decline of the White House Office of Science and Technology Policy in the closing year of the Reagan Administration, prior to his appointment. Short of staff, he writes, OSTP was unable to respond to requests from Congress, as well as other parts of the Administration.

Congress "responded in punitive fashion," Bromley continues, "reducing the OSTP budget when reports were late or non-existent. These cuts in turn reduced the OSTP staff further, and reports became even further overdue or were ignored altogether. It was a vicious cycle that greatly reduced the effectiveness of OSTP and its reputation among members of the Administration and the Congress."—DSG

Job Changes & Appointments

Serge Plattard, Science and Technology Counselor at the French embassy in Tokyo, has been appointed S&T Counselor at the embassy in Washington, starting October 1. Plattard, a nuclear physicist, succeeds ***Claude Wolff***, who has received a one-year appointment as a guest scientist at the Polymer Division of the US National Institute of Standards and Technology, on the outskirts of Washington. Wolff, who was appointed to the Washington embassy post in 1991, holds a professorship at the University de Haute Alsace.

James Gordon, MD, a Professor at the Georgetown University School of Medicine, has been appointed Chairman of a newly established Advisory Council for NIH's Office of Alternative Medicine (OAM)—a 1992 Congressional creation spawned by lay suspicions of therapeutic chauvinism in the biomedical-research establishment. The OAM Council, numbering 18 members, held its first meeting August 31, a few weeks after the resignation of ***Joseph Jacobs***, MD, OAM's founding Director.

George Uriano, founding Director of the Advanced Technology Program in the National Institute of Standards and Technology, plans to retire early next year, after 32 years of government service. NIST says a search will soon begin for a successor. Under Uriano, the NIST budget rose from $10 million in 1990 to $431 million appropriated for next year.

In the job since 1977, ***Bruce K. MacLaury*** says he'll step down next June as President of the Brookings Institution, one of Washington's oldest and biggest non-profit policy-research organizations.

Patricia Fry Godley has been confirmed as Assistant Secretary for Fossil Energy in the Department of Energy, with responsibilities for technologies for natural gas and oil production and cleaner methods for burning coal. An attorney, she practiced energy law in Houston and Washington and, prior to Senate confirmation July 21, served as a Special Assistant to DOE Deputy Secretary Bill White.

Ivar Stakgold, Professor of Mathematics at the University of Delaware, has been appointed head of the Washington Office of the American Mathematical Society, succeeding ***John S. Bradley***, now a program officer in the National Science Foundation's Education and Human Resources Directorate.

Appointed as Executive Director of the Society for Industrial and Applied Mathematics: ***James M. Crowley***, head of the Applied and Computational Mathematics Program at the Pentagon's Advanced Research Projects Agency. Crowley succeeds ***I. Edward Block***, founder of the Society and its managing director since 1976.

William A. Nitze, President of the Washington-based lobby Alliance to Save Energy, has been nominated by President Clinton for the post of Assistant Administrator for International Activities in the Environmental Protection Agency. He has been succeeded at the Alliance by Executive Vice President ***David M. Nemtzow***, a former Congressional staffer who joined the organization last year.

The National Science Teachers Association announces a search for a successor to ***Bill G. Aldridge***, Executive Director of the 50,000-member organization for 14 years, who plans to retire in 1996.

Gallo Confirms He's Discussing a Move from NIH

Prompted by repeated rumors that Robert C. Gallo has been advised from on high that he is no longer welcome at the National Institutes of Health and should move elsewhere by the end of the year, SGR telephoned the renowned virologist and AIDS researcher on September 8 to inquire about the matter.

Returning the call promptly, Gallo started by saying, "I don't know why I'm talking to you." He went on to accuse SGR of being a mouthpiece for his Congressional nemesis, Rep. John Dingell (D-Mich.), whose investigative staffers kept alive allegations that Gallo bloated and misrepresented his accomplishments in AIDS research.

Getting to the job-change question that inspired the call, Gallo said, "I was looking five or six years ago, but had to stop"—presumably a reference to the burden of dealing with the investigations of his Laboratory of Tumor Cell Biology, in the National Cancer Institute.

"I am negotiating," and "trying to instigate some discussions," he said. Asked about reports earlier this year that he would take a post at the Medical University of South Carolina, Gallo was non-committal. He said he is undecided about what he is going to do, but hoped for a decision "in early '95."

Gallo was asked whether he felt NIH management was signalling its attitude toward him through the steady reduction in his lab's budget, from $13 million in fiscal 1990 to an estimated $8.4 million this year.

Initially, he attributed the decline to the general downsizing of government, stating that his reductions "are proportional to the NCI cuts." He also noted that his lab did a considerable amount of outside contracting for animal studies, and that contracts were losing favor at NIH.

Asked whether the cuts in his budget were just part of a general trend, Gallo replied, "I'm not sure."

Gallo volunteered that NIH is losing "lots of branch chiefs"—accomplished, productive scientists. Asked whether NIH had become less congenial, Gallo replied: "NIH had its golden years, and I hope they will return." He added, "I don't know the reason for the departures," but "it may have something to do with the cutbacks."

Other researchers queried by SGR on this point saw no common factor in several notable departures recently from NIH. One senior scientist suggested that financial lures in biotechnology were a potent factor in some cases.

Gallo said he took pride in being a scientific leader and was "not a great manager." Nonetheless, he said, "I'm spending an enormous amount of time in administration." He said he has "no administrative help" in his lab. Contrary to what some people think, he said with evident bitterness, "I went into research to help people. That's what I want to do."

Back to the question of whether NIH is prodding him to leave, after nearly 30 years at NCI and innumerable honors and awards for research, Gallo said: "There's a fear of people on Dingell's staff. Why bullshit it? Everybody says it when we're out in bars."

To the Editor:

SGR, August 1, In Print, reported the publication of Competitiveness Index 1994 *by the Council on Competitiveness, a Washington lobby focused on promoting high-tech industry, and observed that "with the hyper-active Clinton crowd even more devout than the Council, it's difficult to see why this outfit remains in business." In reply:*

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Your comments aimed at the Council on Competitiveness, previous and present Administrations, academia and others are hardly worthy of a serious publication covering national science and R&D policies.

Your interpretation of the Council's conclusions in *Competitiveness Index 1994* is not only superficial—but wrong. While we point out that in recent years a number of economic indices have improved, we also note that the longer trend is not encouraging. This is especially driven home by the survey results of Council members from academia, industry and labor who predict "that America's most difficult competitiveness challenge is still to come."

As to your point concerning why the Council on Competitiveness remains in business, I find that easy to answer. The Council reaches beyond reporting and seeks to add value by focusing our members, Congress, the Administration and the thoughtful public on what is the most important issue we face: economic competitiveness and the implementation of new policies. How well the United States does in this area determines our country's future standard of living and national security.

Erich Bloch, Distinguished Fellow
Council on Competitiveness
[Director, NSF, 1985-90]

(Editor's P.S. Just off the press from the Council, Critical Technologies Update 1994 *(21 pp., $10, plus $1.50 for shipping), a freshening of the Council's 1991 report,* Gaining Ground, *available from the Council on Competitiveness, 900 17th St. NW, Suite 1050, Washington, DC 20006; tel. 202/785-3990; fax 785-3998. Lists of competitive technologies are also produced by the Defense and Commerce Departments, and the subject is monitored by the government's Critical Technologies Institute, an appendage of the White House Office of Science and Technology Policy.)*

Budget Scare at Critical Tech. Inst.

The Critical Technologies Institute (CTI) had a close call this budget season when its House Appropriations Subcommittee gagged on CTI's odd funding arrangement. Though the Institute works for the White House Office of Science and Technology Policy, its money is appropriated to the National Science Foundation, which helped establish CTI. Weary of the fiscal fiction, the House Subcommittee zeroed out the $2 million sought for CTI. The Senate Subcommittee came to the rescue, and in conference the money was restored.

In Print

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Peer Review: Reforms Needed to Ensure Fairness in Federal Agency Grant Selection (GAO/PEMD-94-1; 133 pp., no charge), from the General Accounting Office (GAO), investigative agency for the Congress, only a few minor quibbles—despite the title—about peer review as practiced at the National Science Foundation, the National Institutes of Health, and the National Endowment for the Humanities. Junior scholars and women were underrepresented on peer-review panels, the GAO found, but, "Overall, we found that peer review processes appear to be working reasonably well." The report intriguingly notes that "being well-known was related to funding at NSF and NEH but not at NIH, where well-known and unknown applicants were equally likely to be funded." The differential treatment was not explored by GAO, which conducted the study at the request of Senator John Glenn (D-Ohio), Chairman of the Committee on Governmental Affairs.

Also from the GAO, without charge: ***National Science Foundation: Better Use of Existing Resources Could Improve Program Administration*** (GAO/RCED-94-95; 95 pp.), a critical review of the administration of NSF's fastest-growing component, the politically favored Directorate for Education and Human Resources, whose budget increased from $242 million in fiscal 1990 to $511 million in 1993. However, with federal employment chronically held down by anti-government grandstanding in the White House and Congress, staff for managing that growth increased from $6 million to only $7.3 million in inflation-adjusted money. Doubts naturally ensued over whether NSF was properly managing the big surge, and this study was requested by Chairman Rick Boucher (D-Va.), of the House Subcommittee on Science. The GAO says program officers in the pre-college programs said they're overwhelmed by the workload.

Space Station: Update on the Impact of the Expanded Russian Role (GAO/NSIAD-94-248; 17 pp.), reiterates the conclusions of a GAO report issued in June, ***Impact of the Expanded Russian Role on Funding and Research*** (GAO/NSIAD94-22-0), which cast doubt on claimed savings for the US from Russian participation in the Space Station. According to the latest report, not only will there be no savings, but Russian participation will saddle NASA with an additional $1.4 billion in US expenditures to help the Russians team up with the American program. The GAO report, requested by Senator William S. Cohen, of Maine, ranking minority member on the Subcommittee on Oversight of Government Management, underlines another episode in budgetary audacity, a NASA specialty. On brazen claims of savings, technological advance, and foreign-policy gains, the Space Station easily won Congressional approval.

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20884-6015; tel. 202/512-6000; fax 301/258-4066.

Note: GAO now provides by fax a daily list of titles of its new reports and staff testimony to Congress, with coverage extending back 30 days. Instructions for using this service are available by touchtone phone on 301/258-4097.

Partnership for a New Generation of Vehicles: Program Plan (37 pp., no charge), from the US Department of Commerce, a statement of goals and milestones for the government-industry partnership, announced last September by Clinton, Gore, and the Big Three, to develop a new breed of clean, economical vehicles. Wariness of elephantine bureaucracies and insensitivity to the market has spawned skepticism about this venture. And then there's the matter of money, of which little is visible on the federal side, apart from what the plan refers to as funds "within the existing programs of" participating federal agencies—mainly Defense, Energy, and Commerce. But with the strong blessings of Clinton and Gore, the clean-car program will endure for their time in office, even if it doesn't succeed.

Order from: US Department of Commerce, New Generation of Vehicles Program, Room 7068, Washington, DC 20230; tel. 202/482-6260; fax 202/482-6275.

Saving Energy in US Transportation (GPO Stock No. 052-003-01376-2; 266 pp., $17), from the Congressional Office of Technology Assessment (OTA), says a host of evils, from roadway coagulation to ruinous pollution, is inevitable if we go on like this. Shunning specific policy recommendations, OTA lists as "basic options": retaining and "fine-tuning" the status quo; improved technology, and weaning the US from dependence on private vehicles. A free 30-page summary of the report is available from OTA at 202/224-8996.

Also from OTA: ***Fueling Reform: Energy Technologies for the Former East Bloc*** (GPO Stock No. 052-003-01378-9; 205 pp., $14), warns that energy production in the old bloc is both essential to economic development and impeded by lack of economic and political reforms.

Order from: New Orders, Superintendent of Documents, PO Box 371954, Pittsburgh, Pa. 15250-7954; tel. 202/783-3238; fax 202/512-2250.

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Science in the National Interest (31 pp., no charge), from the White House, in lieu of money, a declaration of esteem for basic research, issued to calm the pouting chiefs of science, who see the Clinton Administration's big bucks and political attention flowing into industrial technology. The contents are derived from a conference staged by the Office of Science and Technology Policy (OSTP) last winter to collect the predictable wishes and lamentations of the science establishment [SGR, February 15]. The result is a vaporous paean to science, lauded as co-equal and intertwined with technology in fulfillment of national goals and therefore worthy of generous federal support. Affection is ladled out for all sectors of research, even the social and behavioral sciences, as well as for the traditional folkways of science, principally peer review, investigator-initiated research, and international collaboration. And politics is counseled to be patient in awaiting the fruits of research. Noting that support of research and development now stands at about 2.6 percent of the nation's gross domestic product, the policy statement cautiously suggests that "a reasonable long term goal ... might be about 3 percent of GDP."

On the crucial issue of setting priorities, *Science in the National Interest* carries on in the spineless tradition of science-policymaking, stating: "We must put into place better mechanisms to evaluate our investment strategy and to make changes as later evaluations and future conditions demand." The concluding call to arms is similarly stirring: "We must all go forward with a sense of shared commitments to common goals and excellence." The policy statement, issued in August during SGR's summer break, is mainly the work of OSTP staffer M.R.C. Greenwood, den mother of the Washington science crowd. Its organizational origin is a National Science and Technology Council subcommittee co-chaired by the Directors of NIH and NSF. Also available, the counterpart statement on technology, issued last November, ***Technology for Economic Growth***.

Order both from: National Science and Technology Council, Old Executive Office Building, Room 435, Washington, DC 20500; tel. 202/456-6100; fax 202/456-6026.

Stresses on Research and Education at Colleges and Universities: Institutional and Sponsoring Agency Responses (16 pp., no charge), nothing new here about the frictions and anxieties afflicting academe, presented in an inventory of woes distilled from a meeting co-sponsored last December by the National Science Board (NSF's board of directors) and the Government-University-Industry Roundtable (an offshoot of the National Academy of Sciences). With representatives of 13 universities participating, the meeting touched on such oldtimers as research versus teaching, commercial contamination of academic purity, public density about the role and importance of higher education, and so forth. Some measure of the tip-toe approach to reform may be inferred from one of several suggested items for pondering in academe: "Give serious and specific consideration to the recommendation of the 1992 report of the President's Council of Advisors on Science and Technology that universities eliminate or down-size some departments and specialties, rather than sustain less than world class activities in every area of science and engineering." Concerning the giving side of the academic-government relationship, federal agencies were advised to be more generous and less bureaucratically sticky with their money.

Order from: National Academy of Sciences, Government-University-Industry Research Roundtable, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3486; fax 202/334-1505.

Selected Data on Federal Support to Universities and Colleges: Fiscal Year 1992 (NSF 94-312; 44 pp., no charge), from the National Science Foundation, advance release of some of the data that will be included in a more comprehensive report due later this year. This abbreviated version includes the top 100 in university receipts of federal R&D funds in fiscal 1992. As usual, the list is headed by Johns Hopkins, with $667 million. But $448 million of that sum went to the Applied Physics Lab, which Hopkins manages for the Navy and, for reasons of Hopkins' own bookkeeping preferences, is lumped with on-campus research. Exclude that oddity, and No. 1 in federal grants and contracts, according to the report, is Stanford, with $266 million, followed by the University of Washington, $258 million.

Also from NSF, without charge: ***Selected Data on Federal Funds for Research and Development: Fiscal Years 1992, 1993, and 1994*** (NSF 94-311, 37 pp.), another early release of a bigger collection to come, this one gives overall and agency-by-agency federal R&D awards for the stated years. The numbers reflect the abrupt slowdown in growth of spending that occurred between 1992-93 and 1993-94, with annual R&D growth dropping from 7.7 percent to a ground-losing 3.9 percent during that period.

Research and Development in Industry: 1990 (NSF 94-304, 144 pp.), notes that industrial R&D spending declined, in real and constant dollars, between 1990 and 1991, and points out that a year-to-year drop had occurred only once before in the 40 years that NSF has been collecting these statistics. Tables and charts provide details on basic, applied, and developmental research expenditures in various industries, R&D employment, expenditures per employe, etc.

Characteristics of Doctoral Scientists and Engineers in the United States: 1991 (NSF 94-307, 90 pp.), reports numbers in the various disciplines, type of employers, salaries, age distribution, etc. (Between publication of these big collections of data, more up-to-date statistics are periodically published by NSF in brief reports.)

Order from: National Science Foundation, Division of Science Resources Studies, Arlington, Va. 22230; tel. 703/306-1780; fax 703/644-4278.

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